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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,365	12/28/2001	Gary E. Horst	EMER2614	2311

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EXAMINER

NGUYEN, TRAN N

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/035,365	<b>Applicant(s)</b> HORST, GARY E.	
	<b>Examiner</b> Tran N. Nguyen	<b>Art Unit</b> 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 6-12, 14-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 6-12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) 21 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED OFFICE ACTION**

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims **6-20** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, **6-8 and 11-15** of **copending Application No. 10/035366** (hereafter APN '366). This is a provisional double patenting rejection since the conflicting claims have not yet been patented, but already allowed.

Although the conflicting claims are not identical, they are not patentably distinct from each other because of the subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows:

A stator for use in a permanent magnet machine, the stator comprising:

a frame having an outer peripheral edge and an inner peripheral edge extending about a central axis;

a plurality of permanent magnets, wherein each magnet having inwardly facing north poles;

a first plurality of stator teeth each extending along a radial axis from the frame's inner peripheral edge toward the central axis, each of the first plurality of stator teeth having one of the permanent magnets located either partly therein or entirely therein; and a second plurality of stator teeth each extending along a radial axis from the frame's inner peripheral edge toward the central axis, each of the first plurality of stator teeth having no magnet located therein. (In other words, this is the same structural recitations of *a plurality of stator teeth wherein every other one of the stator teeth have one magnet located therein or first plurality of stator teeth are each positioned directly between two of the second plurality of stator teeth*); and,

wherein each of the stator teeth with permanent magnet has a first profile, and wherein each of the stator teeth having no permanent magnets has a second profile different than the first profile; and, the first and second profiles each include end regions facing the central axis, and wherein the second profile's end regions taper inwardly towards said inner peripheral edge to a greater extent than the first profile's end regions, and,

each permanent magnet and its corresponding one of the stator teeth have a width extending in a direction of rotation of a rotor when the rotor is mounted for rotation about the central axis, wherein the width of each permanent magnet is greater than the width of its corresponding one of the stator teeth, and,

wherein the stator has twelve stator teeth and the rotor includes eight rotor teeth.

The only difference between the present application and the APN '366 is that the present application recites that the number of the first plurality of the stator teeth is equal to the number

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of second plurality of stator teeth. This is obviously the same as the recitation of the copending application because APN '366 recites that *every other one of the stator teeth have one magnet*, as in claim 6, or *first plurality of stator teeth, each with a magnet, is located between two of the second plurality of the stator teeth, which do not having magnets*, as in claim 11, and there are twelve stator teeth, as in claim 15. Thus, a stator with twelve teeth and every other teeth has magnet located therein. Therefore, the numbers of the first and second plurality of the stator teeth are the same.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 6, 8, 10-12, 14, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1598257 (hereafter GB '257) in view of Shibayama et al (US 6262508).**

GB '254 substantially discloses the claimed invention of a stator having a plurality of first stator teeth and a plurality of second stator teeth, wherein the first stator teeth having

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permanent magnet and located between two of the second stator teeth which do not having magnets (fig 1). GB '254, however, does not discloses the following:

the magnets are respectively located entirely within the stator teeth, wherein the magnets having inwardly facing north poles; and, a rotor with rotor teeth extending outwardly relative to the central axis;

Shibayama, however, teaches a stator (fig 4) for use in a permanent magnet machine, the stator comprising: a frame (11) having an outer peripheral edge and an inner peripheral edge extending about a central axis; a plurality of stator teeth extending from the frame's inner peripheral edge toward the central axis; and a plurality of permanent magnets (PMs) (15), each located entirely within the stator teeth and each of the stator teeth having one of the PMs located entirely therein; and the PMs are arranged in the same polarities (col 4 lines 40-43), and a rotor having rotor teeth extending outwardly relative to the central axis.

Shibayama teaches that the magnets being entirely embedded within the stator teeth would prevent eddy current, and the orientation of the magnet polarities to be the same, i.e., all magnet having inwardly facing north poles or having inwardly facing south poles would enable the initialization of the magnetic fluxes offered by the magnets much more effectively. Regarding the rotor with rotor teeth extending outwardly relative to the central axis, those skilled in the art would understand that this is the well-known structure of a rotor.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the stator by embodying the stator with every stator teeth having magnets are respectively located entirely within the stator teeth, wherein the magnets having inwardly facing north poles, as taught by Shibayama. Doing so would provide the stator with prevent eddy current for the more effective magnetic flux therein and also improve the support of the magnet.

**Claims 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB '257 and Shibayama, and further in view of Torok (US 5117144).**

The combination of GB '257 and Shibayama discloses the claimed invention, except for the added limitations of the stator having 12 stator teeth and the rotor having 8 rotor teeth.

Torok, however, teaches that the stator with PMs and magnetic teeth and the rotor with rotor teeth can have any desired even number of respective rotor teeth and stator teeth (col 4 lines 15+). Furthermore, has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the stator by embodying the machine with the stator includes twelve stator teeth, and wherein the rotor includes eight rotor teeth because the number of poles of respective stator and rotor would enable the machine to yield a preferable output. Doing so would involves only routine skill in the art. *In re Aller, 105 USPQ 233.*

***Allowable Subject Matter***

**Claims 21-22** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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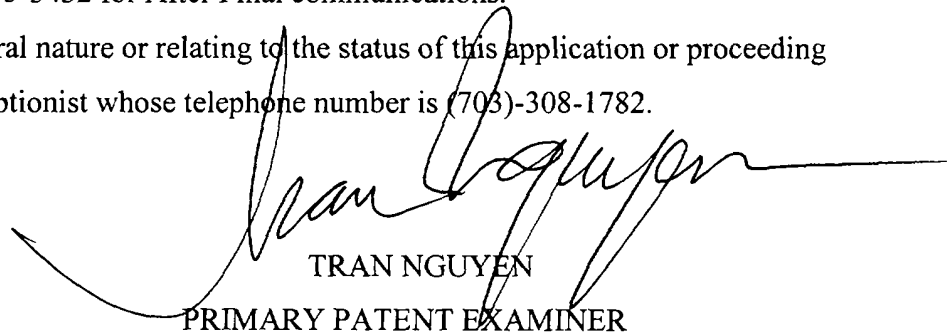
however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N Nguyen whose telephone number is (703) 308-1639. The examiner can normally be reached on M-F 6:00AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)-395-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.



TRAN NGUYEN  
PRIMARY PATENT EXAMINER

TC-2800